

SOUTHEASTERN DISTRICT MAINLAND (ALASKA PENINSULA AREA)  
SALMON MANAGEMENT PLAN, 1996

By

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## INTRODUCTION

The Southeastern District Mainland (SEDM) fishery of Area "M" is located on the south side of the Alaska Peninsula (Figure 1). Included in this fishery are the Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak, East Stepovak, and Stepovak Flats Sections (Figure 2). Under a management plan established by the Alaska Board of Fisheries (BOF) in 1991, and most recently revised in 1996 (Appendix A), the fishery is allocated six percent of the total Chignik bound sockeye salmon harvest through July 25. The present plan to regulate the SEDM fishery is based on the Cape Igvak Salmon Management Plan, in the Kodiak Management Area (KMA), which the BOF instituted in 1978. After July 25, the SEDM is managed for local stocks.

## MANAGEMENT PLAN

### *BOF Changes for the 1996 Season*

The SEDM fishery (Figures 1 and 2) will be managed according to the SEDM Management Plan (Appendix A). During the January 1996 meeting the BOF made the following changes to the SEDM management plan:

1. The area to be managed for local Orzinski Lake sockeye salmon was increased from only Orzinski Bay to the entire Northwest Stepovak Section (Figures 3 and 4). Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs 5AAC 09.360(a)(1) and (b)-(h). Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The Stepovak Flats Section will continue to be managed for chum salmon returning to Stepovak Flats streams throughout the entire season (Figure 5).
2. The percentage of sockeye salmon allocated to the SEDM fishery was decreased by the BOF from 7% to 6% of the total Chignik bound sockeye harvest through July 25. This BOF action was taken to maintain traditional harvest levels of Chignik bound sockeye in the SEDM fishery and to compensate for the increased area managed for local Orzinski Lake sockeye salmon.
3. The BOF established a closed waters area encompassing Kupreanof Point (55°33'59" N. lat., 159°35'53" W. long.) 5AAC 09.350 (38) from July 6 through August 31 (Figure 6).

### *Chignik Sockeye Salmon Forecast and SEDM Allocation*

The forecasted midpoint harvest for the Chignik sockeye salmon runs for 1996 are 1,000,000 salmon for the early run and 1,350,000 salmon for the second run (Appendix B). Historically, about 80% of the Chignik bound sockeye harvest for the entire season occurs through July 25. Therefore, if the runs come in as expected and the goals of the management plan are achieved, about 112,800 estimated Chignik destined sockeye salmon will be harvested in the SEDM area through July 25

(2.35 million, total estimated Chignik sockeye harvest for the entire 1996 season, x 0.80, average % caught through July 25, x 0.06, SEDM percent, equals 112,800 sockeye). The 1996 estimated harvest of about 112,800 Chignik destined sockeye in the SEDM, through July 25, is slightly larger than both the most recent 10 and 20 year averages of 102,305 and 106,265 respectively (Table 1).

The total Chignik sockeye salmon catch is 100% of those sockeye salmon caught within the Chignik Management Area (CMA), 80% of those sockeye salmon caught in the Cape Igvak Section of the KMA, through July 25, and 80% of those sockeye salmon caught in the SEDM fishery through July 25, excluding 100% of those sockeye salmon caught in the Northwest Stepovak Section from July 1 through July 25.

### *Harvest Scenarios*

Because the harvestable surplus in Chignik is expected to exceed 600,000 sockeye salmon, the SEDM fishery may open when the fishery opens in the CMA. Based on the 1,000,000 sockeye salmon early run harvest forecast, it is possible that the first opening for the SEDM fishery could be in early to mid-June.

If the first run fails to develop as expected, the SEDM fishery will be curtailed in order to allow a minimum harvest in the CMA of at least 300,000 sockeye salmon through July 8, if that many salmon are surplus to escapement requirements.

During the period from about June 26 through July 9, the strength of the second run of Chignik River sockeye salmon cannot be evaluated. To prevent over-harvest of the second run, the Alaska Department of Fish and Game (ADF&G) may close or restrict commercial salmon fishing in the SEDM during this period.

After July 8, fishing time in the SEDM fishery will be dependent upon the strength of the second run as evaluated at Chignik and on the catch of Chignik bound sockeye during the first run at Cape Igvak, Chignik, and the SEDM fisheries. When the second run escapement goals are being met and the second run appears strong enough for a fishery at Chignik, the SEDM may open to commercial salmon fishing if at least 300,000 combined first and second run sockeye salmon were harvested in the CMA. ADF&G will manage the fishery so that the number of sockeye salmon harvested in the CMA from both runs combined will be at least 600,000 salmon and the harvest in the SEDM will approach as near as possible 6.0% of the total Chignik bound sockeye salmon catch (Appendix C), if that many sockeye salmon are surplus to escapement requirements.

### *Harvest Goals*

The SEDM fishery will be managed according to the plan as stated in the 1996-1997 Alaska Peninsula commercial salmon fishing regulation book (ADF&G 1996; Appendix A). No attempt will be made to allow equal fishing time with Chignik, as had been done from 1974 through 1977, but rather the goal will be to meet the 6.0% allocation level after the conditions of the management plan have been satisfied. An interim management goal of 6.0% at midnight July 10 will also be attempted after the conditions of the management plan have been satisfied. The interim management

goal of 6.0% at midnight July 10 is desirable to achieve historical harvest levels between set gillnet and purse seine fishers; purse seine gear is legal in the fishery beginning July 11. To meet the goal of 6.0% by July 11 and July 25, the percentage may fluctuate above or below 6.0% prior to July 11 and July 25. Because of the restrictions placed upon the SEDM fishery to protect the Chignik runs, it may not be possible to achieve a 6.0% allocation level, even though escapement goals are met and the minimum catch level of 600,000 salmon at Chignik is exceeded.

### ***Fishing Periods***

The SEDM fishery is regulated independently of other fisheries occurring in the Alaska Peninsula Management Area. However, ADF&G will attempt to have fishing periods in the Northwest Stepovak and Stepovak Flats Sections concurrent with fishing periods in the remainder of the SEDM area to avoid concentrating fishing gear. All fishing periods will be announced by emergency orders. At least 36 hours notice will be given prior to the first commercial fishing period. At least 24 hours notice will be given prior to the opening of any other fishing period, unless it extends the current fishing period.

### ***Dent Point***

There has been confusion for several years concerning the definition of Dent Point. The Alaska Board of Fisheries approved definition of Dent Point is 55° 47'15" N. lat., 159° 52'00" W. long. which is based on the 1983 datum chart. This definition of Dent Point will be used as: (1) the boundary between the Northwest Stepovak and Stepovak Flats Sections; (2) as one of the closed waters points for Stepovak Bay when the head of Stepovak Bay is closed after July 29; and (3) whenever an ADF&G reference is made regarding Dent Point (Figure 5).

### ***Legal Gear Types***

In the SEDM area, set gillnet gear is the only legal gear type allowed through midnight July 10. Beginning July 11, set gillnet, purse seine, and hand purse seine gear types are allowed.

## **LOCAL STOCKS**

### ***Northwest Stepovak Section***

The Northwest Stepovak Section will be managed on the basis of the Orzinski Lake sockeye salmon stock from July 1 through July 25, and after July 25 on local salmon runs.

Based on aerial surveys and weir counts, sockeye salmon escapement requirements for Orzinski Lake by time periods have been developed (Table 2). The sockeye escapement goal for Orzinski Lake is 20,000 adult salmon. In 1995, the total estimated sockeye escapement was 30,000 salmon. ADF&G intends to operate a weir on the Orzinski system in 1996.

A weir was used to count escapements into the lake from 1935 to 1941, and in 1990-95. The earliest recorded sockeye escapement through the weir occurred on June 11, 1940 (11 salmon). Sockeye salmon usually enter the lake about mid to late June, and normally by the second week of July 50% of the annual escapement goal has been achieved. By the end of July or the first week of August about 99% of the escapement goal of 20,000 sockeye salmon has occurred.

After July 25, fishing time will be based on local sockeye, pink, chum, and coho salmon stocks. If the sockeye salmon escapement goals into Orzinski Lake are not met, the Northwest Stepovak Section will be closed, until management of the area shifts to pink salmon.

### ***Stepovak Flats Section***

Commercial salmon fishing in the Stepovak Flats Section is managed for chum salmon returning to local Stepovak Flats streams. Through July 25, eighty percent of the sockeye harvested in this section are considered Chignik destined fish and included in the 6.0% allocation criteria stated in the SEDM management plan. After July 28, the entire Stepovak Flats Section is closed to commercial salmon fishing to protect schooling chum salmon (5 AAC 09.350(23)).

After July 25, the entire SEDM area will be managed on the basis of local stocks (sockeye, pink, chum, and coho salmon)

## LITERATURE CITED

ADF&G (Alaska Department of Fish and Game). 1996. 1996-1997 Alaska Peninsula, Atka-Amliia, Aleutian Islands, and Bristol Bay commercial fishing regulations salmon and miscellaneous finfish, 1996 edition. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Juneau.

McCullough, J.N., A.R. Shaul, R.D. Campbell and R.S. Berceli. 1995. South Peninsula Annual Salmon Management Report, 1994. Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report 4K95-46, Kodiak.



Table 1. Southeastern District Mainland fishery catch of Chignik destined sockeye salmon through July 25, 1983-95.

Year	Total Catch	Northwest Stepovak <sup>a</sup>	Total Catch Minus Northwest Stepovak	Chignik Bound Catch <sup>b</sup>
1983	300,158	15,918	284,240	227,392
1984	595,043	66,209	528,834	423,067
1985	80,957	16,681	64,276	51,421
1986	206,532	59,025	147,507	118,006
1987	244,895	61,287	183,608	146,886
1988	81,160	57,010	24,150	19,320
1989	89,224	83,618	5,606	4,484
1990	164,028	3,279	160,749	128,599
1991	289,727	98,834	190,893	152,714
1992	215,444	98,138	117,306	93,845
1993	210,927	50,257	160,670	128,536
1994	221,657	43,719	177,938	142,350
1995	159,381	49,004	110,377	88,302
Average:				
1991-95	219,427	67,990	151,437	121,149
1986-95	188,298	60,417	127,880	102,304

<sup>a</sup> From 1970-91, the Northwest Stepovak Section figures include the harvest from the entire Northwest Stepovak Section. In 1992, 1993, 1994 and 1995 the figures include only the Orzinski Bay harvest.

<sup>b</sup> From 1970-91, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections. In 1992, 1993, 1994 and 1995, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery except Orzinski Bay where 100% of the sockeye salmon are considered local production.

Table 2. Sockeye salmon adult escapement requirements for Orzinski Lake.

Time Period	Cumulative Escapement Goal
June 15	0
July 1	2,000
July 9	5,000
July 16	10,000
July 23	15,000
August 7	20,000
Season Total	20,000

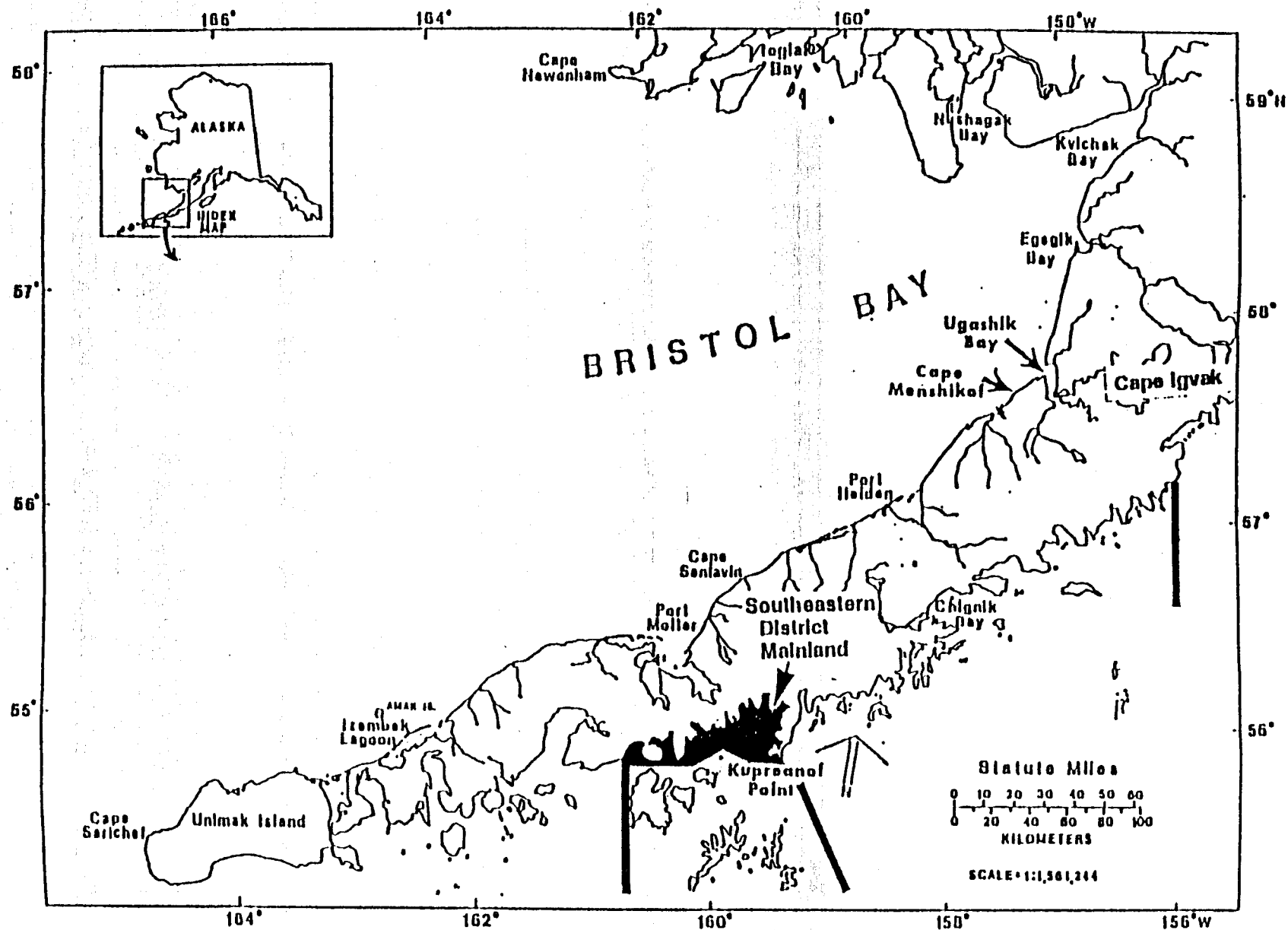


Figure 1. Map of the Alaska Peninsula Management Area with the Southeastern District Mainland area defined.

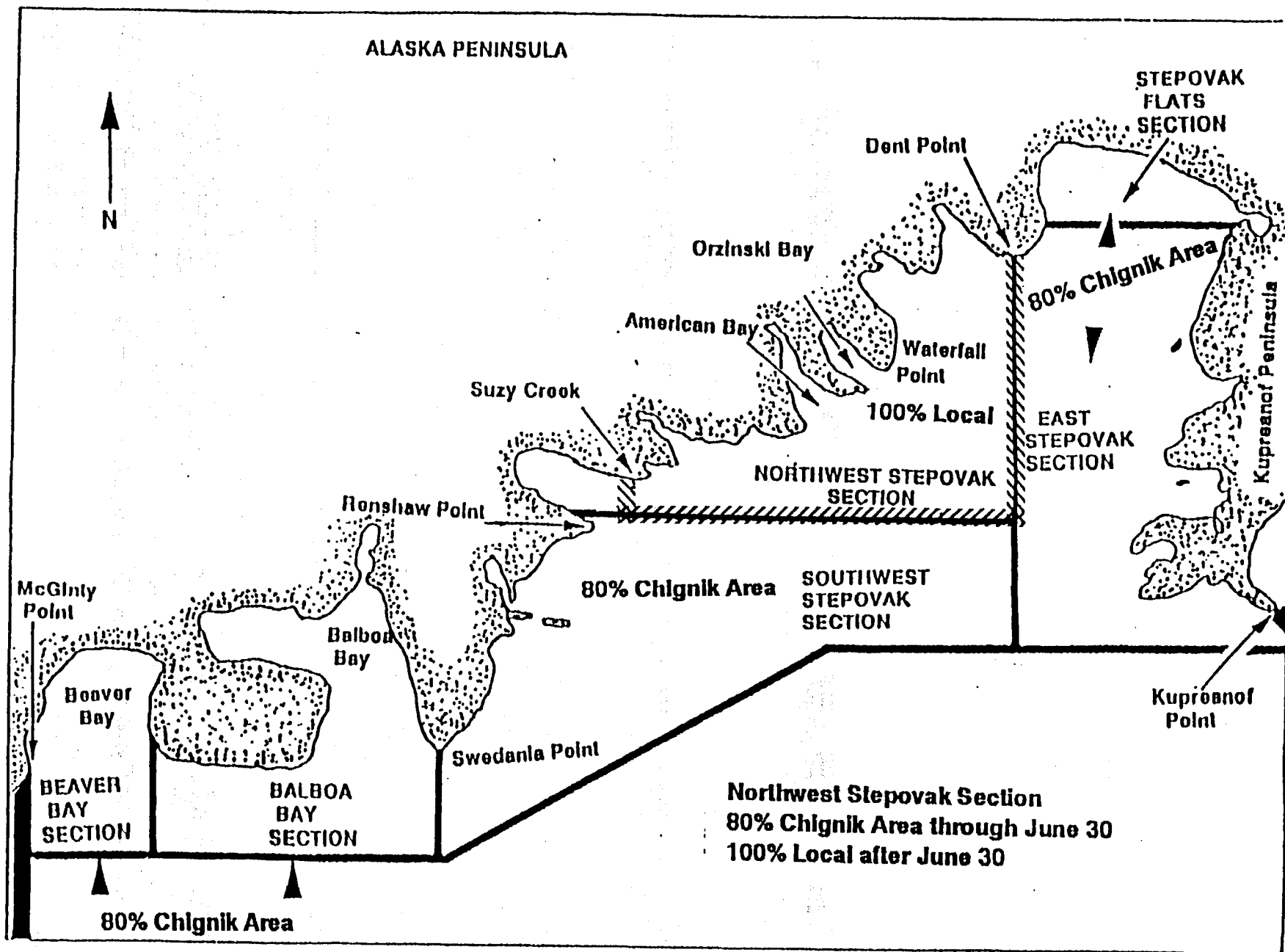
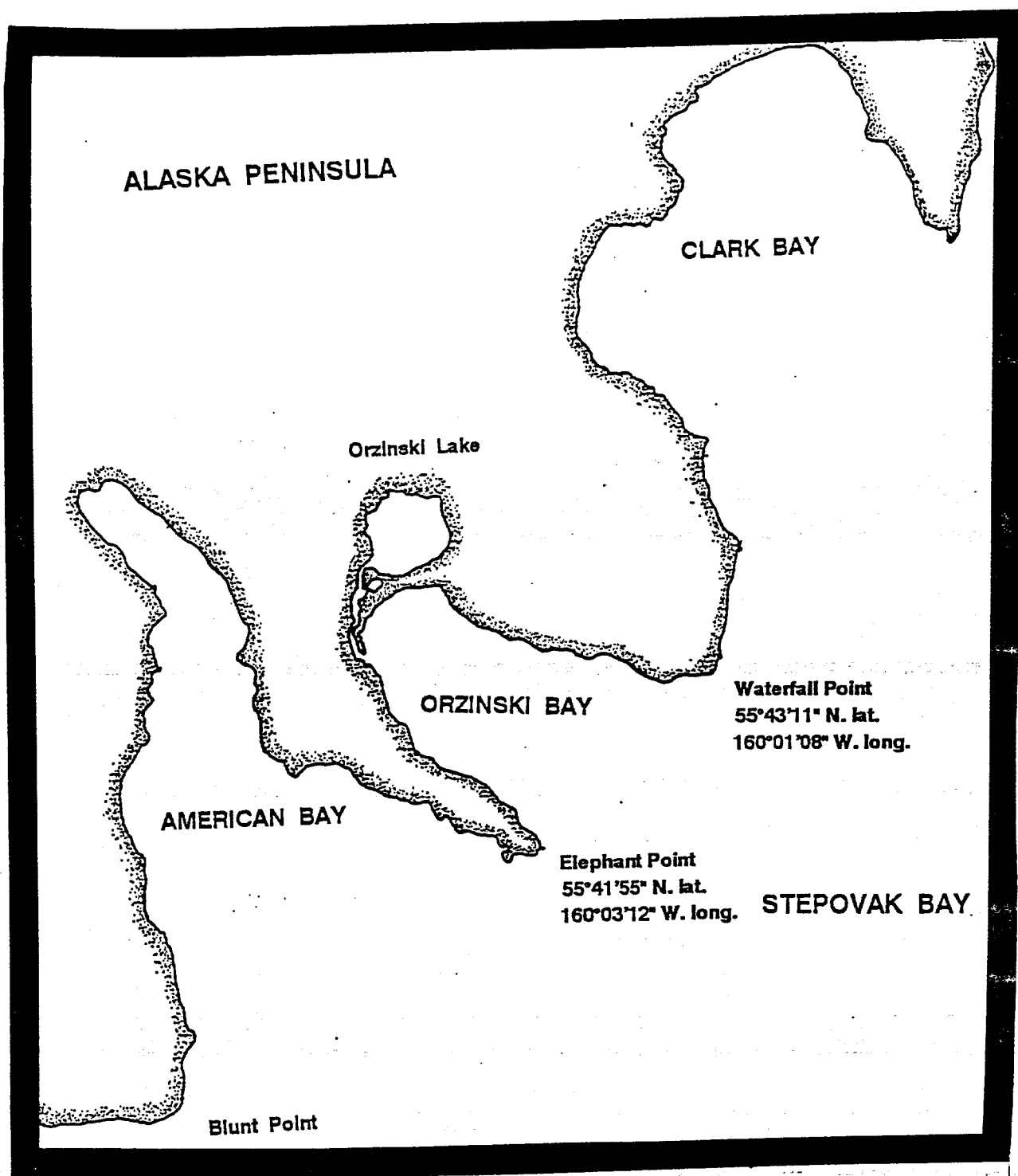


Figure 2. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections delineated.



**Figure 3. Map of Orzinski Bay with Elephant and Waterfall Points defined.**

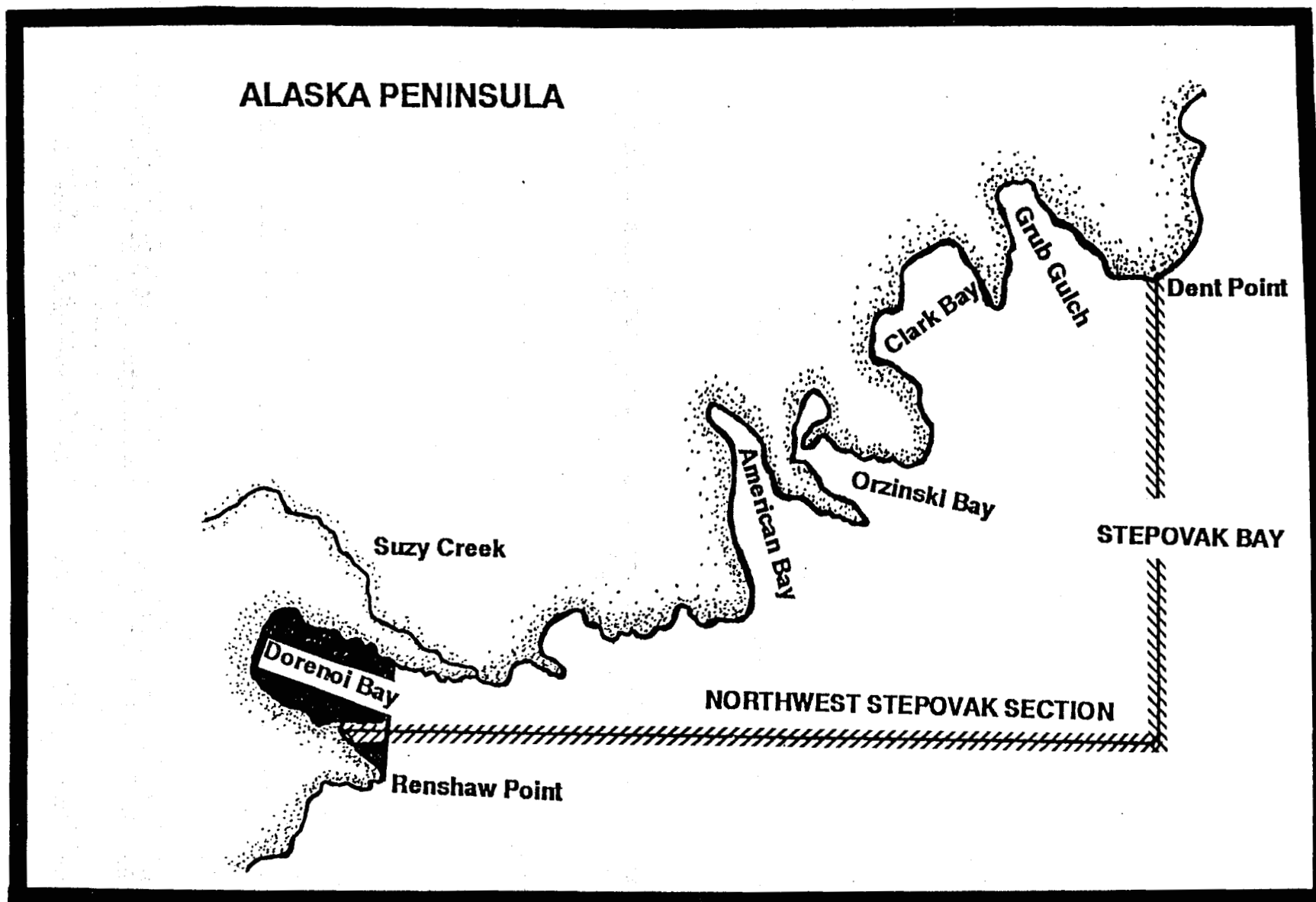


Figure 4. Map of the Northwest Stepovak Section.

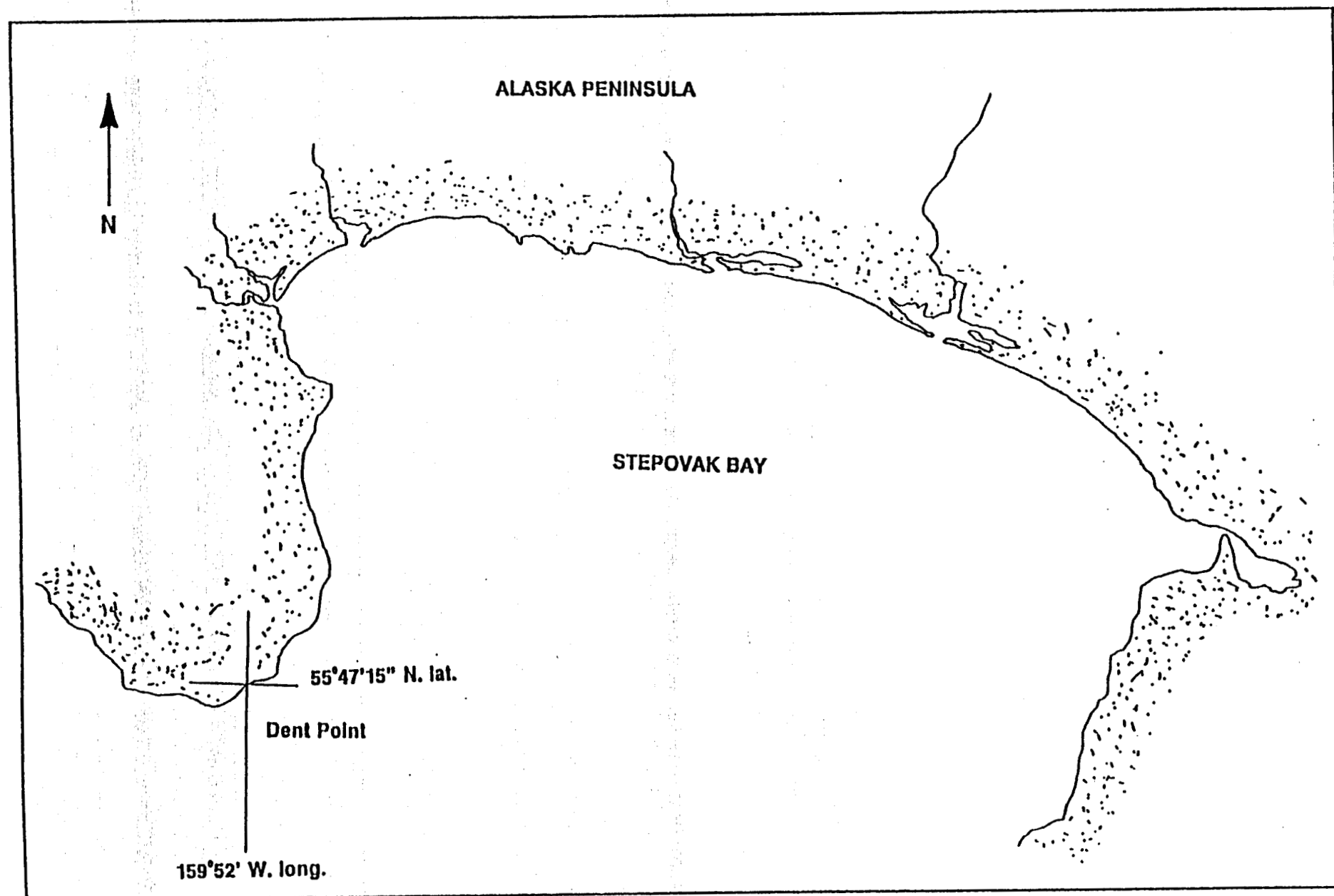


Figure 5. Map of Stepovak Bay with Dent Point defined.

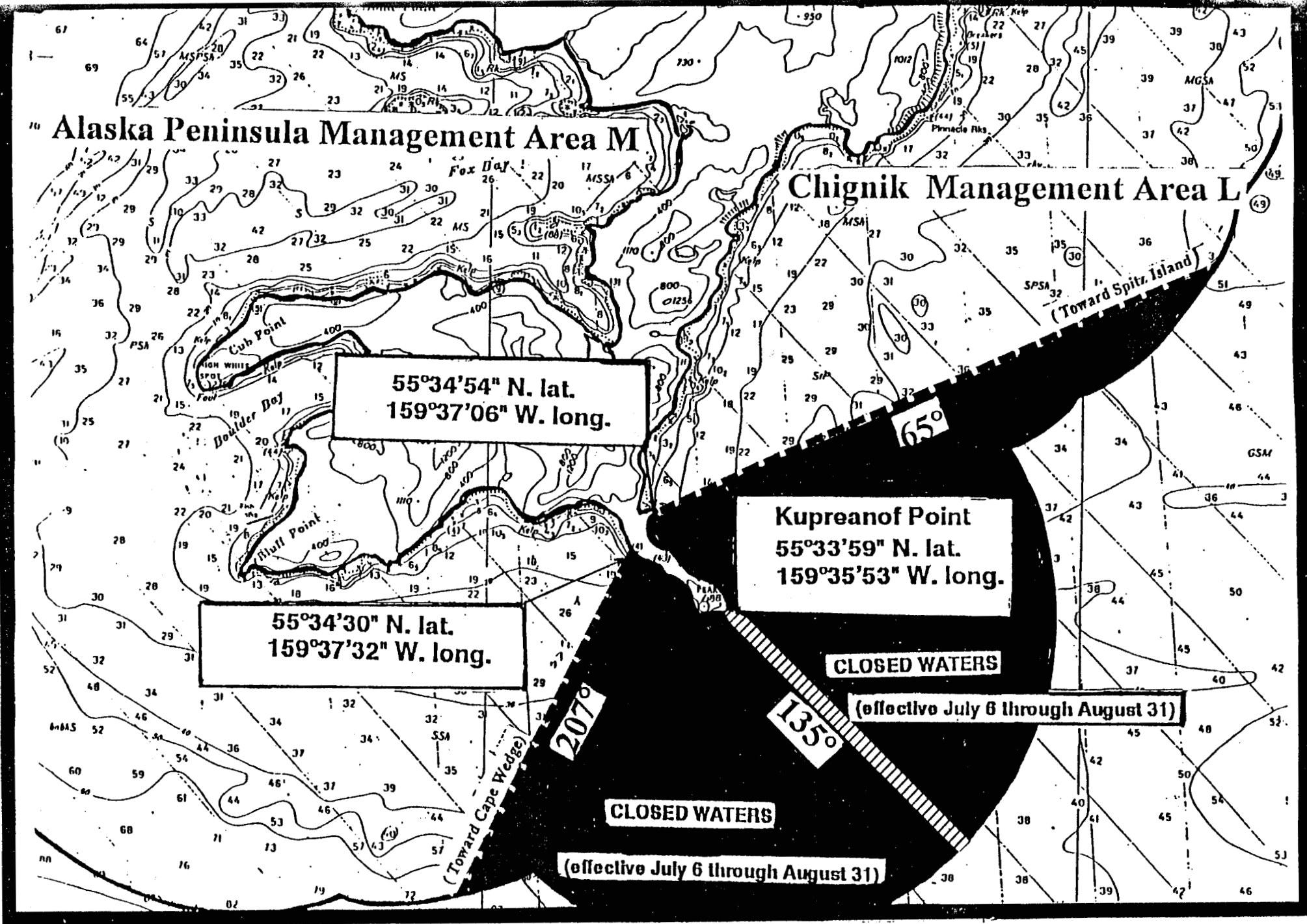


Figure 6. Map of Kupreanof Point area with closed waters defined.



## APPENDIX

## **APPENDIX A:     SOUTHEASTERN DISTRICT MAINLAND SALMON MANAGEMENT PLAN**

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### **5 AAC 09.360. SOUTHEASTERN DISTRICT MAINLAND SALMON MANAGEMENT PLAN**

(a) This plan pertains to the management of the interception of Chignik River sockeye salmon caught in the Southeastern District Mainland fishery: East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. Before July 11, only set gill net gear may be used in these sections. For the purpose of this plan, local runs include only those salmon in the waters:

- 1) beginning July 1, in the Northwest Stepovak Section described 5AAC 09.200(f):
- 2) the Stepovak Flats Section as described in 5 AAC 09.200(f).

(b) In years when a harvestable surplus for the first (Black Lake) and second (Chignik Lake) runs of Chignik River system sockeye salmon is expected to be less than 600,000, no commercial salmon fishery is allowed in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, and before July 1 in the Northwest Stepovak Section, as described in 5 AAC 09.200(f), until a harvest of 300,000 sockeye salmon in the Chignik Area, as described in 5 AAC 15.100, is achieved. After July 8, if at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 and the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections and before July 1 in the Northwest Stepovak Section, approaches as near as possible six percent of the total Chignik sockeye salmon catch.

(c) In years when a harvestable surplus beyond escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 but the first run fails to develop as predicted and it is determined that a total sockeye salmon harvest in the Chignik Area of 600,000 or more may not be achieved, the commercial salmon fishery in the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections and before July 1 in the Northwest Stepovak Section, must be curtailed in order to allow at least a minimum harvest in the Chignik Area of 300,000 sockeye salmon through July 8 if that number of fish are determined to be surplus to the escapement goals of the Chignik River system. After July 8, if at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area is at least 600,000 and the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections and before July 1 in the Northwest Stepovak Section, approaches as near as possible six percent of the total Chignik sockeye salmon catch.

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**APPENDIX A: (page 2 of 2)**

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(d) In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 and the department determines that the runs are as strong as expected, the department shall manage the fishery so that the number of sockeye salmon taken in the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections and before July 1 in the Northwest Stepovak Section, approaches as near as possible six percent of the total Chignik sockeye salmon catch.

(e) The estimate of sockeye salmon destined for the Chignik River has been determined to be 80 percent of the sockeye salmon harvested in the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections and before July 1 in the Northwest Stepovak Section. The sockeye salmon taken in the Northwest Stepovak Section beginning July 1 are considered to be destined for Orzinski Bay.

(f) The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area, plus 80 percent of the sockeye salmon caught in the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, and before July 1 in the Northwest Stepovak Section, as described in 5 AAC 09.200(f), plus 80 percent of the sockeye salmon caught in the Cape Igvak Section of the Kodiak Area. The percentage of Chignik sockeye salmon may be permitted to fluctuate above or below six percent at any time before July 25.

(g) This allocation method is in effect through July 25. The first fishing period of the commercial salmon fishing season in the East Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections and before July 1 in the Northwest Stepovak Section, may not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area. After July 25, commercial salmon fishing in the entire Southeastern District Mainland area may be allowed on local stocks.

(h) During the period from approximately June 26 through July 8, the strength of the second run of the Chignik River system sockeye salmon cannot be evaluated. In order to prevent over-harvest of the second run, the department may disallow or severely restrict commercial salmon fishing in the East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections during this period, and from June 26 through June 30 in the Northwest Stepovak Section

(i) The department shall announce all commercial salmon fishing periods by emergency order. The department shall give at least 24 hour notice before the opening of a commercial salmon fishing period, unless it is an extension of a fishing period in progress.

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## APPENDIX B: CHIGNIK MANAGEMENT AREA PRELIMINARY SOCKEYE FORECAST

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FORECAST AREA: Chignik Management Area

SPECIES: Sockeye salmon

PRELIMINARY FORECAST OF THE 1996 RUN:

	Forecast Estimate	Forecast Range
TOTAL PRODUCTION:		
<u>Early Run (Black Lake)</u>		
Total Run	1,400,000	900,000
Escapement	400,000	-1,900,000
Commercial Common Property Harvest	1,000,000	
<u>Late Run (Chignik Lake)</u>		
Total Run	1,600,000	1,300,000
Escapement	250,000	-1,900,000
Commercial Common Property Harvest	1,350,000	
<u>Total Chignik Run</u>		
Total Run	2,800,000	2,200,000
Escapement	650,000	-3,800,000
Commercial Common Property Harvest	2,350,000	

### FORECAST METHODS

The estimated run to Black Lake is the sum of a regression estimate (1966-95) for two major age classes (ages 1.3 and 2.3) and the most recent 10-year average for minor age classes, while the Chignik Lake run is based on recruit per spawner relationships. The Black Lake forecast is based on the historical relationship between the number and length of prior year age-1.2 fish. All other age classes are predicted from a 10-year average. The Chignik Lake forecast accuracy has historically been quite variable, and developing a model such as the one used for the Black Lake run has been unsuccessful. The 1996 Chignik Lake run forecast was derived using post-1969 average return per spawner relationships for each year class.

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## DISCUSSION OF THE 1996 FORECAST

Early Run: The 1996 Black Lake sockeye salmon run is expected to be 1.4 million fish. This is approximately 0.1 million fish more than the 1985-94 average run of 1.5 million fish and 500,000 fish less than the 1995 forecast. This sockeye salmon run is expected to be average, even though in 1995 age, 1.2 fish were about 12% less abundant than the most recent 10-year average.

Late Run: The estimated 1996 Chignik Lake sockeye run is 1.6 million fish, 0.4 million more than the 1985-94 average of 1.2 million fish. The Chignik Lake run forecast accuracy has historically been quite poor when compared to actual returns. For the 6-year-olds (age 2.3) which typically dominate the run, the parent year (1990) escapement is 335,867. Lake runs have been low.

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Kodiak

## **APPENDIX C: APPLICATION OF FISHERY MANAGEMENT PLANS**

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### **5 AAC 39.200 APPLICATION OF FISHERY MANAGEMENT PLANS**

(a) The Board of Fisheries has implemented by regulation fishery management plans that provide the Department of Fish and Game with guidelines to be followed when making management decisions regarding the state's subsistence, commercial, sport and personal use fisheries. The primary goal of these management plans is to protect the sustained yield of the state's fishery resources while at the same time providing an equitable distribution of the available harvest between various users. The regulations contained in this section are intended to aid in the achievement of that goal and therefore will apply to all fishery management plans contained in 5 AAC 03-5 AAC 39.

(b) In some fishery management plans, the distribution of harvestable fish between various users is determined by the harvest that occurs during a specific time period, at a specific location, or by a specific group or groups of users. At times fishermen, due to circumstances that are beyond the control of the department, such as weather or price disputes, will not harvest fish. When this happens in a fishery governed by a management plan, the goals of the plan may not be achieved. Therefore, when a fishery is open to the taking of fish and the group or groups of users whose catch determines the distribution of the harvest as set out in the applicable management plan are not taking the harvestable fish available to them, the department shall manage the fishery as if the available harvest is being taken. When determining the available harvest, the department shall consider the number of fish needed to meet spawning requirements, the number of fish present in the fishery and in spawning areas that are in excess to spawning requirements, and the estimated harvesting capacity of the group or groups of users that would normally participate in the fishery.

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